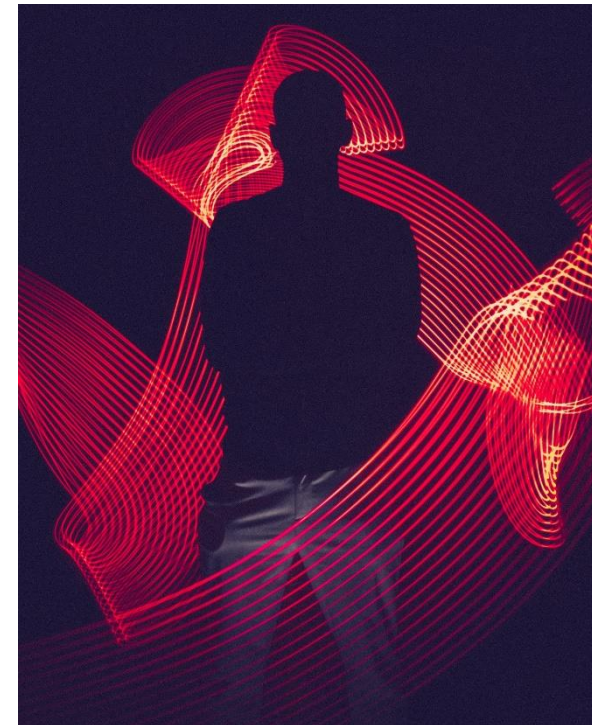


Trends



Future



1

Marine
Autonomous
Surface
Ships

MASS



1

Need a solid foundation
To work in a mixed environment

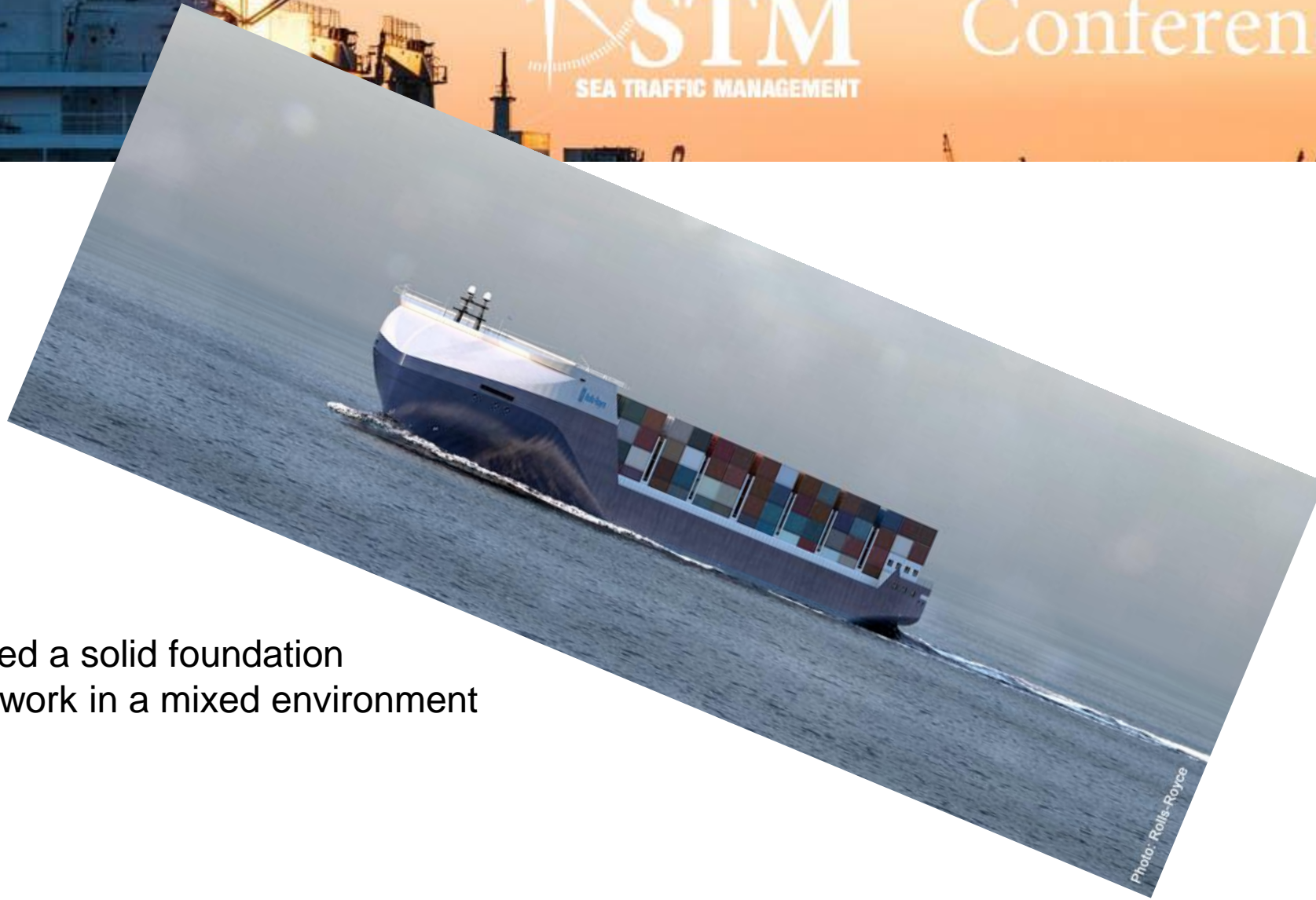


Photo: Rolls-Royce

1



Information sharing
Regulations

Standards
Interoperability

2

International
Association of
Lighthouse
Administrations

Supporting
Navigation
from land

Foreseen
Future
Developments
April 2021

HIGHLIGHTS



1. VTS will be essential for digital information exchange and therefore central to the successful digital transformation within the maritime world.
2. Maritime connectivity is paramount for progressing e-Navigation. It is time to settle on the standards for the first generation of a worldwide connectivity and data communication solution so industry can move forward with innovative solutions.
3. VDES R-Mode can act as terrestrial backup for GNSS by using time-synchronised ranging information. VDES also provides improved communication capabilities.
4. Advanced decision support systems will assist both VTS operators' and navigators' situational awareness, facilitate risk assessment, and improve the safety and efficiency of navigation.
5. The provision of S-100 digital maritime services is a key enabler for e-navigation. Global harmonization of standards is required for a successful implementation of the ambitious digital maritime agenda.
6. Successful VTS training is a crucial factor for delivering VTS in a professional and harmonized way. New skill sets for VTS personnel to meet changing demands will be essential and should be taken into account by relevant authorities.
7. VTS will be fundamental in implementing harmonized digital data to prepare for management of mixed traffic areas with both conventional and autonomous vessels.
8. Autonomous systems, driven by a business case with defined user needs and requirements, are becoming operational and stakeholders need to be prepared. Standardisation, harmonization and definition of responsibilities is required to guide current and future activities.

2

HIGHLIGHTS HIGHLIGHTS

- VTS essential for maritime digital transformation
- Advanced decision support improves safety and efficiency
 - S-100 services key enabler
- Global harmonization of standards a requirement for success
- VTS fundamental to handle mixed traffic (conventional and MASS)

Information sharing
Guidelines

Standards
Interoperability

3

Port efficiency –
Many trends and
New solutions



Port of readiness
Notice Call Optimisation
Trade Leads
Port Community
Just-in-Time
Port Component
Supply chain
EMS
Systems
"Amazonian" threat

3



Information sharing
Harmonization

Standards
Interoperability

Common foundation
For all major trends
Needed for the
Future.

STM/eNavigation – brings this already today!

Summary of the
conference



Existing: Services/solutions: Ports, VTS, coastal states
Existing and emerging Standards: harmonization
Trend: Lower Carbon Footprint – operational efficiency

Summary of the
Conference – this
Is what we do.

Building the
Foundation.



Information sharing
Harmonization

Standards
Interoperability

Get engaged
NOW

Information sharing
Harmonization

Standards
Interoperability

